2SD2345G

Silicon NPN epitaxial planar type

For low-frequency amplification

■ Features

- High forward current transfer ratio h_{FE}
- Low collector-emitter saturation voltage $V_{CE(sat)}$
- High emitter-base voltage (Collector open) V_{EBO}
- Low noise voltage NV

■ Package

- Code
  SSMini3-F3
- Marking Symbol: 1Z
- Pin Name
  1: Base
  2: Emitter
  3: Collector

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	40	V
Emitter-base voltage (Collector open)	V_{EBO}	15	V
Collector current	I_C	50	mA
Peak collector current	I_{CP}	100	mA
Collector power dissipation	P_C	125	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

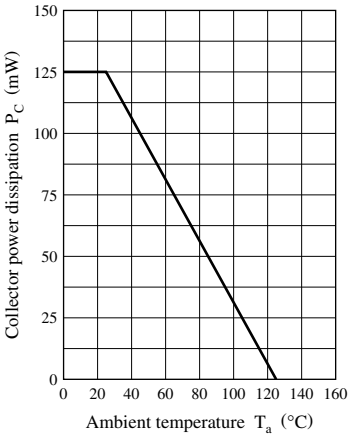
■ Electrical Characteristics $T_a = 25°C \pm 3°C$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	I_C = 10 µA, I_E = 0	50			V
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	40			V
Emitter-base voltage (Collector open)	V_{EBO}	I_E = 10 µA, I_C = 0	15			V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 20 V, I_E = 0			100	nA
Collector-emitter cutoff current (Base open)	I_{CEO}	V_{CE} = 20 V, I_B = 0			1	µA
Forward current transfer ratio *	h_{FE}	V_{CE} = 10 V, I_C = 2 mA	400		2 000	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10 mA, I_B = 1 mA		0.05	0.20	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = −2 mA, f = 200 MHz		120		MHz

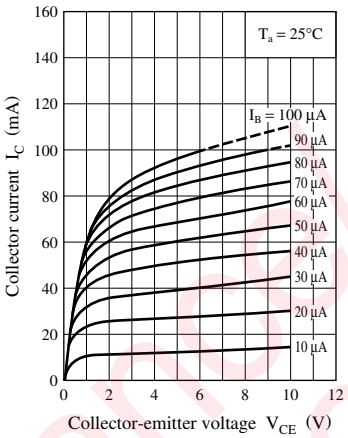
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.
2. *: Rank classification

Rank	R	S	T
h_{FE}	400 to 800	600 to 1 200	1 000 to 2 000

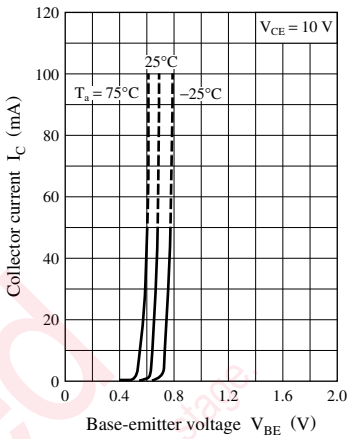
P_C — T_a



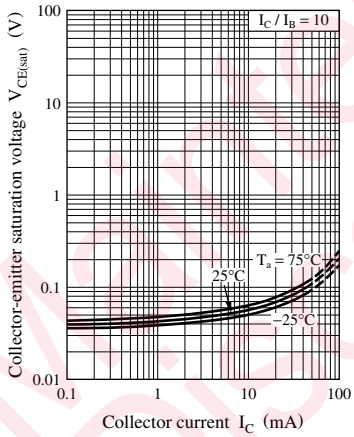
I_C — V_{CE}



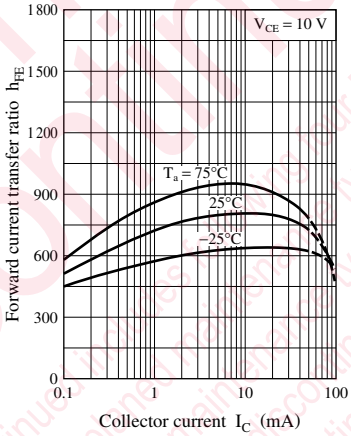
I_C — V_{BE}



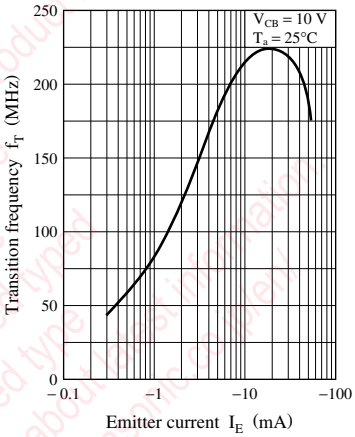
$V_{CE(sat)}$ — I_C



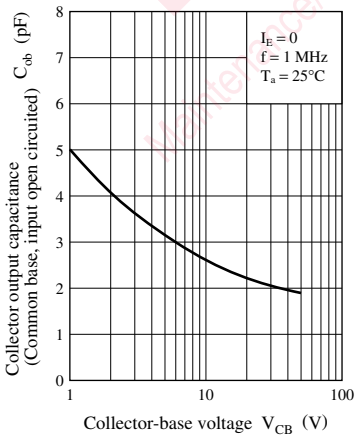
h_{FE} — I_C



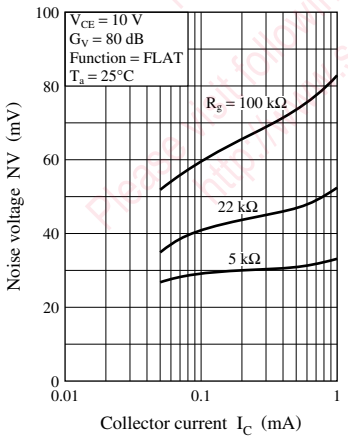
f_T — I_E



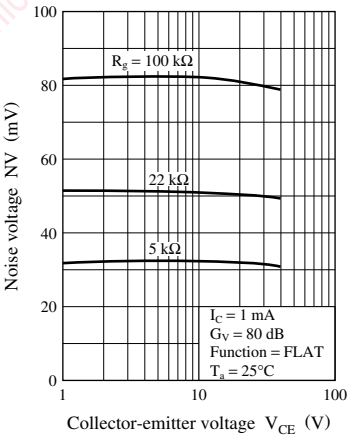
C_{ob} — V_{CB}



NV — I_C

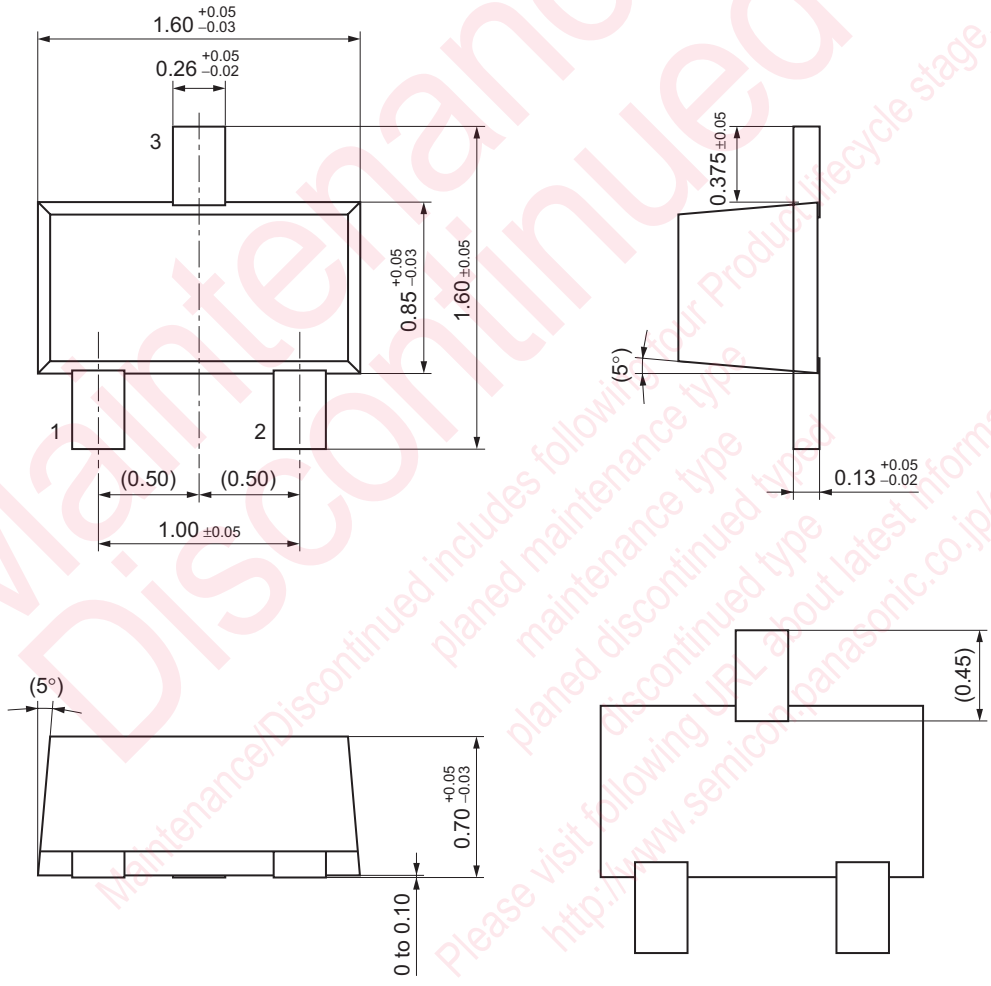


NV — V_{CE}



SSMini3-F3

Unit: mm



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